F. No. J-11011/7/2006-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

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Dated: 24th December, 2020

To

Shri. Rajiv Kumar,
Vice President – Operations,
M/s. Tata Steel Limited,
Kalinganagar Industrial Complex, Duburi,
District Jajpur, Odisha
Email: bhanu.yadav@tatasteel.com

Subject: Expansion of Integrated Steel Plant from 6 to 8 MTPA Crude Steel and 9 MTPA Finished Steel by **M/s. Tata Steel Limited** located at Kalinganagar Industrial Complex, Duburi, **District Jajpur, Odisha - Environment Clearance – regarding.**

Sir,

1. This refers to the application of M/s. Tata Steel Limited made vide proposal no. IA/OR/IND/128148/2016 dated 13/06/2020 along with copy of EIA/EMP report and Form – 2 seeking Environment Clearance (EC) under the provisions of EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

2. The aforesaid proposal was considered in the 20th meeting of the EAC (Industry -1) held on 25-26th June, 2020, 22nd meeting held on 26-28th August,2020 and 25th meeting held on 25-27th November,2020. The proceedings of the said meetings are furnished as below.

Details submitted by the project proponent

3. The detail of the ToR is furnished as below:

Date of application	Consideration	Details	Date of accord
21/09/2016	12th meeting held on 27th - 28th October, 2016	Terms of Reference	14/03/2017

4. As per the amendment to the EIA Notification, 2006 issued vide S.O. 751(E) dated 17/02/2020, the Terms of Reference for the projects or activities issued by the regulatory authority concerned, shall have the validity of four years from the date of issue. Accordingly, the validity of the aforesaid ToR is till 13/03/2021.

5. The project of M/s Tata Steel Limited at Kalinganagar located in Duburi Village, Sukinda Tehsil, Jajpur District, Odisha is for enhancement of production of crude steel from six (6) MTPA to eight (8) MTPA and nine (9) MTPA finished steel.

6. The existing project was accorded environmental clearance vide lr.no. J/11011/7/2006 -IA. II (I) dated 07/11/2006 under the provisions of the EIA Notification, 2006. Following EC amendments and validity extension of EC was obtained from MoEF&CC subsequent to the grant of EC dated 7/11/2016.

S.No.	Date of letter	Details
i.	10/10/2012	Amendment in the EC dated 7/11/2006 was accorded for change in configuration of blast furnace/coke oven battery/lime calcining plant/captive power plant, conversion of 2 nos of sinter plant into 1 no of sinter plant & 1 no. of pellet plant and addition of Cold Roll Mill.
ii.	13/05/2015	Amendment in the EC dated 7/11/2006 was accorded for (i) installation of 24x7 air and water monitoring devices to monitor the air emission and effluent discharge; (ii) Use of wet quenching till the CDQ is stabilized by June, 2016 and thereafter maintain wet quenching as standby; (iii) Use of LDO for generation of power in power plant and DG sets till the Blast furnace gas is available and thereafter maintain LDO as standby.
iii.	13/05/2015	The validity period of the EC was extended till 6/11/2016.
iv.	20/12/2016	Amendment in the EC dated 7/11/2006 was accorded for using wet quenching till the CDQ is stabilized by November, 2016 and thereafter maintain wet quenching as standby.

7. It has been reported that the Consent to Operate from the State Pollution Control Board, Odisha was obtained vide Lr. No. 3938/IND-I-CON-6447 dated 27/03/2020 and consent is valid up to 31/03/2021.

8. The existing and proposed expansion unit details are given as below

S. No.	Production Facilities	6.0 MTPA as per existing EC		Final Configuration at 8 MTPA Crude Steel & 9 MTPA Finished Steel
		Phase 1 (Operational)	Phase 2 (Balance)	
1.	Coke Ovens & By products Recovery Plant	2 X 88 ovens, 5 m tall	2 X 88 ovens, 5 m tall	• 2 X 88 ovens, 5 m tall • 3 X 62 ovens, 6.25 m tall
2.	Sinter/Pellet Plant	1 No. Sinter Plant (496 m^2)	1 No. Pellet Plant	• 1 no. Sinter Plant (496m^2) • 1 no. Pellet Plant (744m^2)
3.	Blast Furnace	1 No x 4300 m^3	1 No x 4300 m^3	• Two BF (1x4330m^3 & 1x5870m^3)
4.	Lime Calcining Plant	2 x 600 TPD Vertical Shaft Kiln	1 x 600 TPD Vertical shaft kiln	• 4 x 600 TPD vertical shaft kiln

S. No.	Production Facilities	6.0 MTPA as per existing EC		Final Configuration at 8 MTPA Crude Steel & 9 MTPA Finished Steel
		Phase 1 (Operational)	Phase 2 (Balance)	
5.	Steel Melt Shop (SMS)	2x300 Nos. of Convertors 1x310 t CAS-OB, 1X twin Strand Slab caster	6.0 MTPA 1 x 300 t Converter 1x 310 t twin RH, 1X twin Strand Slab caster	8.1 MTPA Crude Steel • 3 x 310 t BOF converters • 1 x 310 t CAS-OB • 1 x 310 t twin RH • 2 x 310 tons LF • 2 x twin Strand Slab caster • 1 Multi Strand Billet Caster
6.	Mills	Hot Strip Mill 1 X 5.5 MTPA	Cold Rolling 1 X 2.2 MTPA	• Hot Strip -1 No. 7 MTPA • Cold Rolling- 1 No. 2.2 MTPA • LP Mill – 2.0 MTPA
7.	Captive Power Plant	2 x 67.5 MW by-product gas based	1 X 67.5 MW by product gas based	• 3 x 67.5 MW by product gas based • 1 x 67.5 MW by product gas cum coal tar firing

9. The total land required for the project is 1250 ha (this is part of 1405 ha available as part of MOU with Govt of Odisha). This is industrial land and presently utilized by project proponent. No forestland is involved. The entire land has been acquired for the project and is in possession of proponent. It has been reported that no water body exists around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

10. The topography of the area is moderately undulating and reported to lie between 850 59'43" to 86° 02'39" N Latitude and 20° 56'55" to 20° 58'53" E Longitude in Survey of India topo sheet Nos. F45T13, F45O4, F45N16 & F45U1 at an elevation of 120 m AMSL. The ground water table reported to ranges between 0.92 to 4.58 m below the land surface during the post- monsoon season and 3.05 – 8.38 m below the land surface during the pre-monsoon season. Further, the stage of groundwater development is reported to be around 27.48% in core zone and 27.48% & 33.82% in the buffer zone and thereby these are designated as safe area.

11. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to for corridor for Schedule-I fauna.

12. The targeted production capacity of the Integrated Steel Plant is 8 MTPA crude steel and 9 MTPA finished steel. The ore for the plant would be procured from own mines, imported and multiple domestic sources (open market). The ore transportation will be done through Rail with 5% road transport for exigencies.

13. The raw material requirement for the proposed project is given as below:

S.No.	Incoming raw materials / additives	Annual consumption MT	Source	Mode of transport	Distance of source from project site, km
1	Iron Ore (Fines)	12.13	Own Mines/Import/ Multiple domestic Source	Rail-100%(exigency 5% by Road)	400
2	Coking Coal	5	Import/Own Mines/Multiple domestic Source	Rail-100%(exigency 5% by Road)	600
3	Lump Ore/External Pellet	1.5	Domestic	Rail-100%(exigency 5% by Road)	400
4	Anthracite	0.1	Import/Multiple domestic Source	Rail-100%(exigency 5% by Road)	300
5	PCI Coal	1.6	Own Mines/Import/ Multiple domestic Source	Rail-100%(exigency 5% by Road)	600
6	Limestone	2.41	Import/Multiple domestic Source	Rail-100%(exigency 5% Road	300
7	Bentonite	0.056	Import/Multiple domestic Source	Rail-100%(exigency 5% Road	300
8	Pyroxenite / Olivine/ Quartzite	0.351	Import/Multiple domestic Source	Rail 50%	300
9	Ferro Alloys	0.06	Import/Multiple domestic Source	Road-100%	300
10	DRI	0.432	Multiple domestic source	Rail-100%(exigency 10 % by road	300
11	Scrap	0.1	Multiple domestic source	Rail 50% & Road 50 %	300

14. The water requirement of the project is estimated at 112,704 m^3/day, which will be obtained from Kharsua river. The permission for drawl of surface water is obtained from Dept. of Water resources, Govt. of Odisha vide Lr. No. 24977/WR dated 7/11/2019.

15. The power requirement of the project is estimated as 664 MW, out of which 270 MW will be obtained from captive power plant, 44 MW from CDQ, 51 MW from BF TRT, 220 MW from Grid and balance through open market.

16. Baseline Environmental Studies

Period	22/12/2016 to 27/03/2017
AAQ parameters at 8 locations	$PM_{2.5}$ = 36.1 to 67.2 $\mu g/m^3$ PM_{10} = 66.6 to 105.5 $\mu g/m^3$ SO_2 = 5.2 to 25.4 $\mu g/m^3$
AAQ modelling	PM_{10} = 1 $\mu g/m^3$ SO_2 = 0.5 $\mu g/m^3$ NOx = 3.4 $\mu g/m^3$
Ground water quality at 8 locations	pH: 6.16 to 7.08, Total Hardness: 110 to 370.67 mg/l, Chlorides: 18.64 to 139.31 mg/l, Fluoride 0.1 mg/l. Heavy metals are within the limits
Surface water quality at 8 locations	pH: 7.1 to 7.2; DO: 5.4 to 6.2 mg/l and BOD: 3 to 10.3 mg/l. COD from 9.6 to 37.8 mg/l.
Noise levels	7.5 to 73.3 dBA for daytime and 38.0 to 67.4 dBA for night time.

17. It has been reported that a total of 40,88,800 tons per year of waste will be generated due to the project, which will be reused in process or sold to external agency. Hazardous waste like chrome sludge would be transferred to HWTSDF for safe disposal. The details of the solid waste generation and its utilization is given as below:

Solid wastes	**Indicative composition (% w/w)**	**Expected generation (TPD)**	**Re-utilisation Measures**
BF Slag	Granular solid Fe_2O_3 - 10-15 CaO= 25-28 Al_2O_3 =10-15 SiO_2 = 30-35 MgO- 5-8	5,000-6,500	Abt. 95% would be granulated and sold to cement manufacturers; balance 5% as dry slag would be used for land reclamation and road construction. The MoU for sale of BF slag is given in Appendix 2 -5
Steelmaking Slag (BOF & LF)	Lumps Fe_2O_3 - 30-33 CaO= 45-50 SiO_2 = 10-15 MgO- 2-5	3,500-3,650	20% of the metallics in the slag would be recovered and reused in BOF. A portion of non-metallic part would be used as flux in sinter plant & in soil conditioning. Balance would be utilised as railway ballast, concrete, road making etc. after proper weathering
DE Systems and BF Flue dusts, sludges	Fine dusts Fe (T)= 35-40 CaO= 5- 6 C= 30-40 SiO_2 =8-10	450-500	Recycling in sinter plant
	Solid flakes Fe (T) = 72-75 Oil= 8-10		100% utilisation within the plant

Solid wastes	Indicative composition (% w/w)	Expected generation (TPD)	Re-utilisation Measures
Mill Scales/ Sludge	SiO2 <0. 5 Mn O <0. 5	1,000 - 1, 100	
Scrap		1,150-1,200	100% reuse within the plant
Mill Scrap		600-620	100% reuse within the plant
Lime fines		400-450	100% reuse within the plant
Coal tar sludge & BOD sludge		280-300	Recycled back in Coke ovens
Chrome sludge		0.01 - 0.014	Transferred to authorized agency

18. It has been envisaged that an area of 464 ha will be developed as green belt (including existing greenbelt) around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

19. The Public hearing of the project was held on 25/10/2019 at JDCL Complex, Pankapal under the chairmanship of ADM (Kalinganagar, Jajpur). The issues raised during public hearing are local employment, health, drinking water, periphery development, training, plantation and environment protection etc.

20. The capital cost of the project is Rs 21000 Crores and the capital cost for environmental protection measures is proposed as Rs 2620 crore. The annual recurring cost towards the environmental protection measures is proposed as Rs 50 crore. The employment generation from the proposed project is 19000 Nos. PP has submitted the action plan based on PH proceedings and SIA conducted. An amount of Rs. 4820 lakhs have been earmarked to address the issues raised during public hearing and Rs. 830 Lakhs has been earmarked to address the issues based on Social Impact Assessment (SIA) conducted.

21. Greenbelt will be developed in 464 ha in around plant area which is about 33% of the total plant area, including existing greenbelt (200 ha). Local and native species will be planted with a density of 2500 trees per hectare.

22. The proponent has mentioned that there is no court case under EIA Notification to the project or related activity.

23. EIA Consultant engaged for the EIA-EMP Report is M/s. M. N. Dastur & Co. (P) Ltd. (Accredited EIA Consultant Organizations).

Consideration of proposal on merit

24. The Expert Appraisal Committee in its meeting held on 25-26th June, 2020 recommended to laterally refer the proposal cited above to EAC – Violation Sector for considering under the provisions of S.O. 804 (E) dated 14/03/2017 as the project proponent has gone ahead with the construction of Phase 2 of 6 MTPA crude steel capacity beyond the validity period of the EC dated 7/11/2006 without obtaining prior Environment Clearance as mandated under the provisions of EIA Notification, 2006.

25. In this context, the Competent Authority in the MoEF&CC observed that instant case is beyond the applicability of S.O. 804 (e) dated 14/03/2017 and the case should be considered by EAC as normal project. Further, directed to adopt the following principle in all cases where violation is suspected or alleged: -
    i. Send the matter to the Sector EAC for consideration of the case on merit.
    ii. Take action against the alleged violation as per law.
    iii. Do not wait for either the evidence of action having been started or violation proceedings to finish before taking up the case on merit.
    iv. The EC if given after consideration on merit would be valid from the date it is given and not with retrospective effect. For the period before it, if violation is established by the court or the competent authority, the punishment/penalty as per law would be imposed.

26. In pursuance to the aforesaid directions, the proposal was considered by the EAC only on merit and following actions have been taken by the Ministry against the alleged violation as per law.
    i. Direction issued on 28/09/2020 under section 5 of the Environment (Protection) Act, 1986 to stop the construction activity till the EC is obtained.
    ii. Letter issued to the State Government of Odisha with a request to initiate legal action against PP under section 15 read with section 19 of the Environment (Protection) Act, 1986.

Observations of the Committee

27. The Committee noted the following:
    i. The Committee noted that the EIA/EMP report is found to be in order reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data reported and incremental GLC due to the proposed project are within NAAQ standards.
    ii. The Committee has also deliberated on the public hearing issues as well as action plan to address the issues raised public hearing and found satisfactory.
    iii. Additional information as well as written reply submitted during the course of meeting by the project proponent found to be satisfactory, and addressing the concerns of the Committee.
    iv. The EAC has considered the proposal only on merit as per the directions of the Competent Authority.

Recommendations of the Committee

28. In view of the foregoing and after detailed deliberations, the committee recommended the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 pertaining to integrated steel plants based on project specific requirements.

Decision of MoEF&CC

29. The Ministry of Environment, Forest and Climate Change has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1) hereby decided to grant Environment Clearance for instant proposal under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-

34/2018-III dated 9/8/2018 pertaining to integrated steel plants based on project specific requirements. Further, the EC accorded is valid from the date it is given.

A. Specific conditions

i. Green belt shall be developed in 33 % of the plant area in first two years and maintained later for gap fillings, casualty replacements and ensuring survival.

ii. Biodiversity park being developed shall have a section on Species that control air pollution. It will also have a section of locally rare and endangered species.

iii. Plant shall be ZLD. Reverse Osmosis and Multiple Effect Evaporator (MEE) shall be provided for Coke Oven effluent treatment.

iv. Pollution control systems and equipment shall be upgraded/ designed to achieve less than 30 mg/Nm^3 particulate matter. In existing systems, the bags under scheduled replacement cycle shall be replaced with PTFE bags.

v. PP shall minimize and control Dioxins/Furan emissions from sinter plants, charging and pushing emissions from Coke Ovens and mercury emissions from power plans. Dioxins and furans shall be monitored half yearly. Monitoring reports shall be submitted regularly to RO.

vi. Adequate space shall be kept vacant for installation of dioxin control in future.

vii. The data acquired through CEMS, shall be used for control of processes in order to control the stack emissions. This should include the MIS for closing the non-conformity loop.

viii. SMS Slag shall be used as soil conditioner in watershed management area to supplement micro nutrients.

ix. PP shall recover and recycle unburnt carbon from BF flue dust and GCP sludge.

x. PP shall use steam and CO_2 to age and fix the SMS slag for use as concrete for road making.

xi. 100 percent waste utilization shall be ensured. PP shall install a state-of-the-art Waste Recycling Plant (WRP) to process various types of slags and wastes generated in the plant to recover and recycle metalics, fluxes, aggregates and boulders.

xii. PP Shall use ultra-low NOx burner with three stage, combustion, flue gas recirculation and auto combustion control system in the new plant.

xiii. Specific water consumption post expansion shall not exceed 4 m^3 per ton of crude steel and specific power consumption shall be less than 620 kwh per ton of crude steel as committed in the reply to ADS points.

B. General conditions

I. Statutory compliance:

i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers

and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.

iv. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.

v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

vi. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

vii. Secondary emission control system shall be provided at SMS Converters.

viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

ix. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

x. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.

xi. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).

xii. Land-based APC system shall be installed to control coke pushing emissions.

xiii. Monitor CO, HC and O_2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.

xiv. Vapour absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.

xv. In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NOx control facility shall be provided to meet the prescribed standards.

xvi. The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.

xvii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

xviii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

xix. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.

xx. Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th

May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;

iv. Adhere to 'Zero Liquid Discharge'

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

vii. Tyre washing facilities shall be provided at the entrance of the plant gates.

viii. CO_2 injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.

ix. The project proponent shall practice rainwater harvesting to maximum possible extent.

x. Treated water from ETP of COBP shall not be used for coke quenching.

xi. Water meters shall be provided at the inlet to all unit processes in the steel plants.

xii. The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

i. The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.

ii. Coke Dry Quenching (CDQ) shall be provided for coke quenching for the coke oven plant.

iii. Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.

iv. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.

v. Use hot charging of slabs and billets/blooms as far as possible.

vi. Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.

vii. Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.

viii. Restrict Gas flaring to < 1%.

ix. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;

x. Provide LED lights in their offices and residential areas.

xi. Ensure installation of regenerative type burners on all reheating furnaces.

VI. Waste management

i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.

ii. Tar Sludge and waste oil shall be blended with coal charged in coke ovens.

iii. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.

iv. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.

v. Used refractories shall be recycled as far as possible.

vi. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.

vii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

viii. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.

ix. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard

operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xiv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

This issues with the approval of the Competent Authority.

(A.K. Agrawal)
Director

Copy to:-

1. Secretary, Department of Forests, Government of Odisha, Secretariat, Bhubaneswar.
2. Regional Officer, Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3, Chandrasekharpur, Bhubneshwar-751 023.
3. Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. Chairman, Odisha State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneshwar-751012.
5. Member Secretary, Central Ground Water Authority, West Block –II, Wing -3, Sector I, R.K.Puram, New Delhi – 110086.
6. District Collector, Jajpur District, Odisha.
7. Guard File/Record File/Monitoring File.
8. MoEF&CC website.

(A.K. Agrawal)
Director